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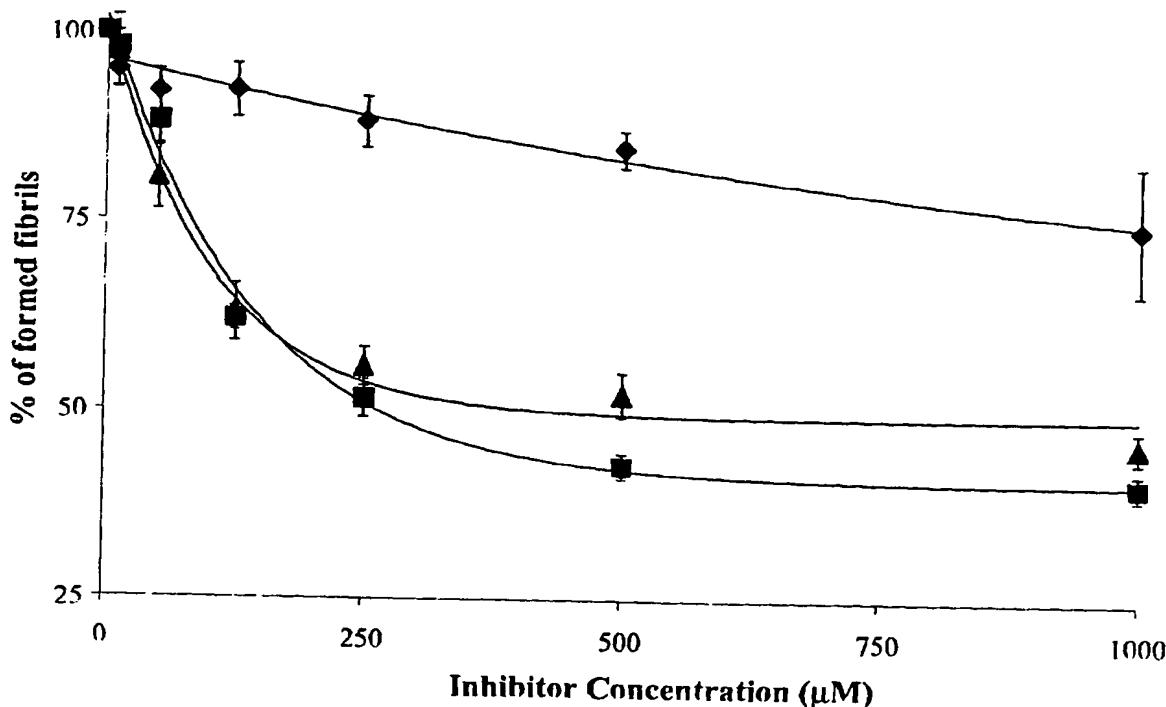
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[Continued on next page]

(54) Title: BETA-AMYLOID INHIBITORS AND USE THEREOF



(57) Abstract: Peptides and derivatives or analogs thereof are provided for having β -amyloid aggregation inhibitory activity, useful in the treatment and prevention of diseases such as Alzheimer's disease, Dementia pugilistica (including head trauma), Hereditary Cerebral Haemorrhage with amyloidosis of the Dutch type (HCHWA-D) and vascular dementia with amyloid angiopathy.



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, Sequence Search, BIOSIS, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 00/63246 A (GOUR BARBARA J ;ADHEREX TECHNOLOGIES INC (CA); BLASCHUK OREST W (C) 26 October 2000 (2000-10-26) page 14; claims 1-35,39 ----- WO 01/07473 A (STOTT KELVIN) 1 February 2001 (2001-02-01) cited in the application * the entire document, in particular pages 4,30 and 31 * ----- WO 00/29427 A (CYCLACEL LTD ;FISCHER M PETER (GB); ZHELEV NIKOLAI (GB)) 25 May 2000 (2000-05-25) page 4 - page 5; claims 1-46; table 1 ----- -/-	

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/062989 A (SEQUITUR INC) 15 August 2002 (2002-08-15) page 23; claim 42 -----	
A	FR 2 829 940 A (SYNT EM) 28 March 2003 (2003-03-28) page 1 – page.3 -----	
A	US 6 399 584 B1 (ARPIN MONIQUE ET AL) 4 June 2002 (2002-06-04) column 1 – column 2; example 5 -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0063246	A	26-10-2000	US	6303576 B1		16-10-2001
			AU	4478900 A		02-11-2000
			WO	0063246 A2		26-10-2000
			US	6677116 B1		13-01-2004
WO 0107473	A	01-02-2001	AU	766992 B2		30-10-2003
			AU	6173700 A		13-02-2001
			CA	2378779 A1		01-02-2001
			EP	1203019 A1		08-05-2002
			WO	0107473 A1		01-02-2001
			JP	2003505469 T		12-02-2003
			NZ	516441 A		28-11-2003
WO 0029427	A	25-05-2000	AU	766489 B2		16-10-2003
			AU	1063000 A		05-06-2000
			CA	2350919 A1		25-05-2000
			CZ	20011671 A3		17-10-2001
			EP	1135410 A2		26-09-2001
			WO	0029427 A2		25-05-2000
			GB	2346616 A , B		16-08-2000
			HU	0204199 A2		28-03-2003
			JP	2002530059 T		17-09-2002
			US	2002098236 A1		25-07-2002
WO 02062989	A	15-08-2002	WO	02062989 A2		15-08-2002
			US	2003031655 A1		13-02-2003
FR 2829940	A	28-03-2003	FR	2829940 A1		28-03-2003
			WO	03026700 A2		03-04-2003
US 6399584	B1	04-06-2002	AT	218881 T		15-06-2002
			AU	3600199 A		11-10-1999
			DE	69901805 D1		18-07-2002
			DE	69901805 T2		06-03-2003
			WO	9947150 A2		23-09-1999
			EP	1061941 A2		27-12-2000
			US	2002115633 A1		22-08-2002